

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 30

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JOHN C. NEWKIRK, LARRY D. ROSE,
DONALD R. LAURITZEN, MICHAEL J. RAVENBERG, MARK A. THOMPSON,
DAVID J. GREEN and TERRY R. DAVIS

Appeal No. 98-0680
Application No. 08/685,160¹

ON BRIEF

Before MEISTER, PATE and McQUADE, **Administrative Patent Judges**.

MEISTER, **Administrative Patent Judge**.

DECISION ON APPEAL

¹ Application for patent filed July 23, 1996. According to appellants, this application is a continuation of Application No. 08/280,894 filed July 27, 1994, now abandoned; which is a continuation-in-part of Application No. 07/993,277 filed December 18, 1992, now U.S. Patent No. 5,470,105 issued November 28, 1995.

Appeal No. 98-0680
Application No. 08/685,160

This is an appeal from the final rejection of claims 1 and 18-36, the only claims present in the application.

We AFFIRM-IN-PART.

The appellants' invention pertains to an inflatable restraint air bag module assembly of the type using a non-symmetric or "hybrid" gas inflator and to a vehicular inflatable restraint system utilizing such an assembly. Independent claims 1 and 25 are further illustrative of the appealed subject matter and copies thereof may be found in the appendix to the brief.

The references relied on by the examiner are:

Sakurai	4,925,209	May 15,
1990		
Good	5,069,480	Dec.
3, 1991		
Rion	5,308,108	May
3, 1994		

Claims 1, 18-24 and 26-29 stand rejected under 35 U.S.C. § 103 as being unpatentable over Good in view of Rion.

Claims 25 and 30-36 stand rejected under 35 U.S.C. § 103 as being unpatentable over Good in view of Rion and Sakurai.

Appeal No. 98-0680
Application No. 08/685,160

The rejections are explained on pages 2-5 of the final rejection. The arguments of the appellants and examiner in support of their respective positions may be found on pages 9-24 of the brief, pages 2-10 of the reply brief and pages 4-10 of the answer.

OPINION

We have carefully reviewed the appellants' invention as described in the specification, the appealed claims, the prior art applied by the examiner and the respective positions advanced by the appellants in the brief and reply brief, and by the examiner in the answer. As a consequence of this review, we will sustain the rejections of claims 1, 18-21, 24-31, 35 and 36. We will not, however, sustain the rejections of 22, 23 and 32-34.

Considering first the rejection of claims 1, 18-21, 24 and 26-29 under 35 U.S.C. § 103 as being unpatentable over Good in view of Rion, the examiner made the findings that (1) Good teaches a gas inflator or generator 72, a pillow or air bag 100, an inflation gas diffuser or "retainer" 92 having at least one gas inflation passage and an elongated open-mouth reaction canister 30 having sides that include sections extending beyond the diffuser or retainer 92 and (2) Rion teaches an inflation assembly for an air bag 80 including a non-symmetric or hybrid gas inflator 12 and a diffuser or manifold 10 having a row of openings 44a-44d that distribute the gas evenly for the purpose of preventing the air bag "to

Appeal No. 98-0680
Application No. 08/685,160

initially inflate asymmetrically" (column 4, lines 21 and 22).

The examiner then concluded that:

It would have been obvious to one of ordinary skill in the art to modify Good to include an elongated inflator with an outlet adjacent one end and openings arranged in the diffuser face member so as to distribute gas evenly and hence prevent skewed deployment while placing some of the openings adjacent the ends of the diffuser and hence the ends of the housing in view of Rion's teaching in order to use a hybrid inflator while achieving even distribution (column 2, lines 36-40 of Rion)(note also this meets claim 27). As broadly recited in claim 18, in the combination Rion teaches openings 44a-44d longitudinally spaced from each other, and these spaced openings meet at least one of the conditions of the claim (i.e., opening 44a is spaced from opening in an area adjacent the first end).
[Final rejection, page 3.]

In argument the appellants note various alleged deficiencies of the references individually and urge that the examiner's position

indicates a failure to appreciate the nature of the invention. More specifically, the claimed invention does not require that the diffuser "distribute gas evenly" but rather that the air bag deploy in a non-skewed manner without the flow of inflation gas through the diffuser being significantly restricted. As stated above, in the claimed invention the diffuser and the reaction canister cooperate whereby the air bag deploys from the reaction canister in a non-skewed manner without the flow of inflation gas through the diffuser being significantly restricted and such a result is achieved through the proper specified placement of the diffuser gas flow through

Appeal No. 98-0680
Application No. 08/685,160

[the] area adjacent one or more of the reaction
canister first and second ends. [Brief, page 11.]

We are unpersuaded by the appellants' arguments. It is true that the claims on appeal do not require the gas to be distributed evenly; nevertheless, we share the examiner's view that a combined consideration of Good and Rion would have fairly suggested to the artisan to utilize a non-symmetric or hybrid gas

generator to inflate the air bag of Good as taught by Rion.

In making this determination we note that the teachings of Good and Rion, taken as a whole, establish that the use of symmetric and non-symmetric gas generators are art-recognized alternatives and one of ordinary skill in this art would have been well aware of the advantages and disadvantages of each.

See, e.g., In re Heinrich, 268 F.2d 753, 756, 122 USPQ 388, 390 (CCPA 1959). In modifying Good in accordance with the teachings of Rion, we share the examiner's view that one of ordinary skill in the art would have utilized evenly spaced openings in the diffuser or retainer 92 of Good as taught by Rion in order to achieve Rion's expressly stated advantage of

Appeal No. 98-0680
Application No. 08/685,160

preventing the air bag from initially inflating asymmetrically (see column 4, lines 21 and 22).

In the reply brief (page 2) the appellants argue that Rion attributes the non-asymmetric inflation of the air bag to the manifold and not the holes. This argument overlooks the fact that the evenly spaced holes are a part of the manifold and form the **final** distribution path of the inflation gas as it is deployed. See column 4, lines 23-36, wherein it is stated that the inflation gas is channeled into chambers 22a,22b and **then out openings 44a-44d** in order "to provide for a more uniform inflation of the air bag."

The appellants also contend that the member 92 of Good cannot be considered to be a diffuser in accordance with the examiner's findings since Good styles this member as a "retainer." However, regardless of the terminology employed by Good to describe the member 92, it is self-evident that Good's inflation gas flows through the openings in this member and is "diffused" thereby. Indeed, we are at a loss to understand how the appellants can seriously make such a

Appeal No. 98-0680
Application No. 08/685,160

contention, inasmuch as the openings and face of this member bear a remarkable resemblance to the "diffuser" 16 depicted by the appellants in the embodiment of FIG. 1.

It is also the appellants' contention that

Rion specifies that the gas generator retainer thereof provides a "robust, rigid structure" and provides the chambers 22a and 22b wherein gas flow is restricted to then be distributed to provide a more uniform airbag inflation. Thus, the assembly of Rion requires and relies on the prior art approach of restricted gas flow [Reply brief, pages 3 and 4.]

We must point out, however, that the primary reference to Good teaches a member that is styled as a retainer 92 which, as we noted above, can be considered to be a "diffuser" and appears to have no significant restriction whatsoever. Contrary to the apparent position of the appellants, when combining the teachings

of references in order to establish obviousness under § 103, it is not necessary that all of the features of the secondary reference be bodily incorporated into the primary reference (***see In re Keller***, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981)) and the artisan is not compelled to blindly follow the teaching of one prior art reference over the other without the

Appeal No. 98-0680
Application No. 08/685,160

exercise of independent judgment (**Lear Siegler, Inc. v. Aeroquip Corp.**, 733 F.2d 881, 889, 221 USPQ 1025, 1032 (Fed. Cir. 1984)).

Moreover, even if the appellants were correct in the assertion that the member 92 of Good cannot be considered to be a "diffuser" and the manifold or "diffuser" 10 (including the chambers 22a,22b and openings 44a-44d) of Rion must be bodily incorporated into the air bag assembly of Good, we share the examiner's view that the resultant structure would not result in the inflation gas being "significantly restricted" as the appellants allege. Reviewing the appellants' disclosure, no particular definition of "without being significantly restricted" is set forth in the specification and, from perusal of the specification and drawings, it is apparent that this terminology has been used in a very broad sense. Accordingly, giving this terminology its broadest reasonable interpretation,² the inflation gas

² It is well settled that the terminology in a pending application's claims is to be given its broadest reasonable interpretation (**In re Morris**, 127 F.3d 1048, 1056, 44 USPQ2d 1023, 1028 (Fed. Cir. 1997) and **In re Zletz**, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989)).

flow of Rion does not appear to be "significantly restricted," especially when compared to the appellants' embodiments of FIGS. 13-16. In response to the examiner's position in this regard, the reply brief on page 3 states:

As clearly shown in FIG. 15, the diffuser 320 overlies a non-symmetric gas output inflator 314. The inflator 314 includes a cylindrical container 314 and a discharge assembly 336. The diffuser 320 includes gas passage apertures 364(A-B) adjacent the end plates 344A and 344B respectively, with the relatively large gas passage aperture 364B directly overlying the inflation gas outlet ports 338 of the inflator discharge assembly 336.

Similarly, FIGS. 13, 14 and 16 also show air bag module assemblies wherein the diffuser face member includes a relatively large gas passage aperture directly overlying the corresponding inflation gas outlet ports. Such placement/positioning of diffuser gas passage apertures serves to minimize or avoid gas flow restriction as output gas from the inflator can pass directly through such directly overlying apertures.

It does not follow, however, that merely because the inflation gas can pass directly upwardly from one or two of the outlet ports in the inflator through an aperture in the diffuser, that the gas flow **as a whole** can be considered to avoid gas flow restriction as the appellants would apparently have us believe. Taking FIG. 15 as exemplary, only the flow from one outlet port 438 of the inflator (i.e., the outlet port

directly underlying aperture 464B) is illustrated as passing directly upwardly through aperture 464B in the diffuser. Even outlet port 438, which is next closest to aperture 464B, is illustrated as having some gas flowing through aperture 464B and some gas flowing through aperture 466C. The gas flow from the lowermost outlet ports 438 is clearly depicted as passing through apertures 466A and 466B. Thus, while the gas flowing from the one or two outlet ports which ***open directly upward*** under the aperture 464B can pass freely through the aperture, the gas discharging from any of the remaining outlet ports 438 must pass between the annular space between the wall of reaction canister and the inflator (compare FIGS. 12 and 15) in order to exit through any of the apertures 464B, 466A, 466B or 466C. Accordingly, the gas flow from any of these remaining outlet ports is "channeled" (much in the same manner as the gas flow of Rion). Note also that the gas flow through gas outlet ports 84a, 84b of the inflator of Rion appear to be in substantially direct alignment with the apertures 44a of the manifold or diffuser 10.

The appellants additionally contend that the examiner has improperly relied on a dictionary definition to determine the

Appeal No. 98-0680
Application No. 08/685,160

meaning of the word "adjacent" since "that term is described and defined in the application such [as] at page 31, line 9 through page 32, line 2, for example" (brief, page 11); however, we have carefully reviewed the specification but fail to find therein any explicit definition of the word "adjacent." While the referenced portion of the specification states that conventional manufacturing processes "typically" can result in margins having a width of "no less than about 5 mm.," and that such a margin is understood as being "adjacent," there is no **definition** which **limits** the meaning of the word "adjacent" to such a width. Since the appellants have failed to make the meaning of "adjacent" explicitly clear in the specification, the term "adjacent" will be given its "broadest reasonable interpretation." **See In re Morris, supra**, and **In re Zletz, supra**. This being the case, we find no error in the examiner's use of a dictionary to determine the meaning of this term. While the appellants have relied upon the decision in **General American Transportation v. Cyro-Trans.**, 93 F.3d 766, 39 USPQ2d 1801 (Fed. Cir. 1996) for the notion that it is improper to utilize a dictionary to

Appeal No. 98-0680
Application No. 08/685,160

determine the meaning of "adjacent," we must point out that this case involves the interpretation of **patent** claims in an infringement proceeding (see the discussion in **Morris** for the differences between claim interpretation in **patents** in infringement proceedings vis-à-vis **applications** pending before the PTO).

As to claim 28, the appellants contend that the references do not teach that at least about 70% of the gas flowing into the air bag is parallel to the ends of the reaction canister. However, inasmuch as the outlet apertures in the diffusers of both Good and Rion lie in planes that are generally perpendicular to ends of the reaction canisters, there is a reasonable basis to conclude that at least about 70% of the gas flow is inherently parallel to the ends.

In view of the foregoing, we will sustain the rejection of claims 1, 18-21, 24 and 26-29 under 35 U.S.C. § 103 as being unpatentable over Good in view of Rion.

Turning to the rejection of claims 25, 30, 31, 35 and 36 under 35 U.S.C. § 103 as being unpatentable over Good in view of Rion and Sakurai, the examiner considers that it would have

been obvious to mount the air bag assembly of Good, as modified by Rion, in the dashboard of a vehicle in view of the teachings of Sakurai. The appellants, however, note that claim 25 requires that the air bag have a direction of deployment "generally towards an oppositely seated vehicle occupant" and contend that Sakurai appears to have a bag deployment which is in an "upward direction." We are unpersuaded by such a contention. First, we observe that the primary reference to Good teaches that the air bag deployment should be "toward the passenger" (column 1, line 27). Accordingly the artisan, when incorporating the air bag assembly of Good (as modified by Rion) into a dashboard in accordance with Sakurai's teachings, would deploy the air bag "generally directly towards an oppositely seated vehicle occupant" as claimed. Second, the air bag assembly of Sakurai is expressly stated to operate "to protect the occupant seating on the assistant driver's seat from impacts" (column 1, lines 13-15) and, although it appears from Fig. 1 of Sakurai that there might be a slight upward component in the direction of bag deployment, we nevertheless are of the opinion that the direction of Sakurai's bag deployment can be

Appeal No. 98-0680
Application No. 08/685,160

considered to be "**generally towards** an oppositely seated vehicle occupant" (emphasis added) as claimed. Therefore, we will sustain the rejection of claims 25, 30, 31, 35 and 36 under 35 U.S.C. § 103 as being unpatentable over Good in view of Rion and Sakurai.

Considering last the rejections under 35 U.S.C. § 103 of claims 22 and 23 as being unpatentable over Good in view of Rion and claims 32-34 as being unpatentable over Good in view of Rion and Sakurai, the examiner has taken the position that

the first area of Rion can be at least 60% of the gas flow area comprised of first and second areas even if the holes are uniformly depending on where the first area is defined to end. [Answer, page 8.]

We are at a loss to understand the examiner's position. The first area is clearly defined as being "adjacent" the first end of the reaction canister. We find nothing in the combined teachings of the relied on prior art which either teaches or fairly suggests such an arrangement. Accordingly, we will not sustain the rejections under 35 U.S.C. § 103 of claims 22 and 23 based on the combined teachings of Good and Rion and of claims 32-34 based on the combined teachings of Good, Rion and Sakurai.

Appeal No. 98-0680
Application No. 08/685,160

In summary:

The rejections of claims 1, 18-21, 24-31, 35 and 36 under 35 U.S.C. § 103 are affirmed.

The rejections of claims 22, 23 and 32-34 under 35 U.S.C. § 103 are reversed.

Appeal No. 98-0680
Application No. 08/685,160

No time period for taking any subsequent action in
connection with this appeal may be extended under 37 CFR
§ 1.136(a).

AFFIRMED-IN-PART

JAMES M. MEISTER)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
WILLIAM F. PATE, III)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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JOHN P. McQUADE)	
Administrative Patent Judge)	

Appeal No. 98-0680
Application No. 08/685,160

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Appeal No. 98-0680
Application No. 08/685,160

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